STOCK Adrb1 tm1Bkk Adrb2 tm1Bkk/J

Stock No: 003810 | 1-AR-; 2-AR-

Targeted Mutation

AVAILABLE

PLACE ORDER

Live mice available in varying quantities. Ask Customer Service for details.

Overview

Also Known As: 1-AR-; 2-AR-

Stimulation of beta adrenergic receptor function in homozygous null mice for the Adrb1 and Adrb2 genes by agonists or exercise reveals significant impairments in chronotropic range, vascular reactivity and metabolic rate. When exercised, heart rates in null mice are lower than that of wild type mice.

Donating Investigator
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[N7-3p]F18</td>
<td>(2018-04-03 00:00:00)</td>
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</table>

**Adrb2**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Adrb2</td>
<td>adrenergic receptor, beta 2</td>
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</table>

**Adrb1**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Adrb1</td>
<td>adrenergic receptor, beta 1</td>
</tr>
</tbody>
</table>

VIEW GENETICS

RESEARCH APPLICATIONS

- Metabolism Research
- Cardiovascular Research
- Neurobiology Research
- Sensorineural Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

$236.78 Domestic price for female

VIEW PRICE LIST

Details

Detailed Description

Mice that are homozygous null for the Adrb1 and Adrb2 genes are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. Stimulation of beta adrenergic receptor function in these mice by agonists or exercise reveals significant impairments in chronotropic range, vascular reactivity and metabolic rate. A severely attenuated chronotropic and hypotensive response is observed after administration of the non-selective beta adrenergic receptor agonist isoproterenol. An abnormal response
to epinephrine is also seen, with bradycardia and a monophasic hypertensive blood pressure change being observed rather than the tachycardia and biphasic hypertensive/ hypotensive response seen in wildtype mice. When exercised, heart rates in null mice are lower than that of wild type mice. No difference is noted in the resting heart rate.

Development

Control Suggestions

Selected References

Genetics

\textit{Adrb2}^{\text{Bkk}}

\textit{Adrb1}^{\text{Bkk}}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

QPCR: \textit{Generic Neo Quantitative PCR-QPCR- 1.2}
Probe: \textit{Adrb1}^{\text{Bkk}}-Probe
Standard PCR: \textit{Adrb2}^{\text{Bkk}}
MELT: \textit{Adrb2}^{\text{Bkk}} MCA
Separated PCR: \textit{Adrb1}^{\text{Bkk}} alternate4
Genotyping resources and troubleshooting

Dietary Information

LabDiet\textsuperscript{\textregistered} 5K52 formulation (6\% fat)

Breeding Considerations

These mice are maintained by mating double homozygote null mice. A number of strains have contributed to the background (C57BL/6J, DBA/2, 129, FVB/N, CD-1) which will be designated as STOCK.

Additional Breeding and Husbandry Support

Mating System

Homozygote x Homozygote
Citation

When describing the 129Sv-cg-sb(+) mouse strain in a publication, please cite the originating article(s) and include JAX stock #003810 in your Materials and Methods section.

Facility Barrier Level Descriptions

AX11 (Maximum)

Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Aдрb1&lt;sup&gt;tm1Bkk&lt;/sup&gt; Homozygous for Aдрb2&lt;sup&gt;tm1Bkk&lt;/sup&gt;</td>
<td>$236.78</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Aдрb1&lt;sup&gt;tm1Bkk&lt;/sup&gt; Homozygous for Aдрb2&lt;sup&gt;tm1Bkk&lt;/sup&gt;</td>
<td>$236.78</td>
</tr>
</tbody>
</table>

Related Products and Services

Frozen Mouse Embryo $2,595.00 per straw or vial

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All